

# MOBILE PHONE WITH MAIL TRANSMISSION/RECEPTION FUNCTION

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- European:

Application number: JP20010164028 20010531

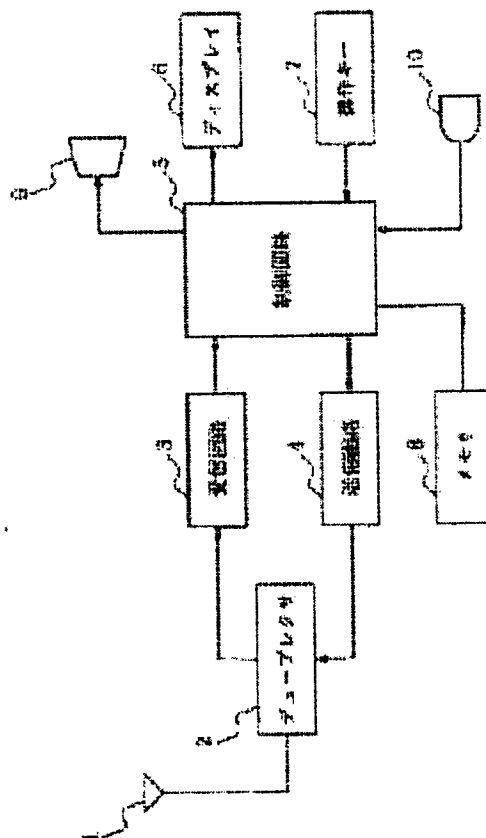
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## Abstract of JP 2002359667 (A)

**PROBLEM TO BE SOLVED:** To quickly confirm contents of desired mail among pieces of transmitted or received mail in a mobile phone capable of mail transmission/reception. **SOLUTION:** The mobile phone is provided with a memory 8 that stores the pieces of transmitted or received mail and a control circuit 5 that carries out mail management procedures.; The control circuit 5 carries out a procedure that retrieves mail with an address whose initial letter is assigned to any of characters of each operation key 7 from the memory 8, a procedure that displays the presence of mail by each operation key 7 on a display device 6, a procedure that lists up addresses of mail whose initial letters are respectively assigned to the operation keys 7 when a user operates the operation keys 7, and a procedure that displays contents of mail with a selected address in accordance with the user operation selecting one address among the listed up addresses.



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CLAIMS

[Claim(s)]

[Claim 1]Have a display (6) and two or more operation keys (7), and to each operation key (7). One number, and at least one hiragana and/or a Roman alphabet are assigned, and by operation of these operation keys (7), a character input is possible and. A memory means which stores with an address mail transmitted and/or received in a portable telephone which can transmit and receive e-mail, According to predetermined operation by a user, mail of an address which makes an initial character a character which each operation key (7) is assigned is searched from a memory means, an operation key -- (-- with the 1st control means that displays existence of e-mail on a display (6) at every 7). According to operation of one operation key (7) by a user, about mail of an address which makes an initial character a character which this operation key (7) is assigned. An address chosen according to user's operation which chooses one address, a title, or an addresser name from the 2nd control means that carries out the list display of an address, a title, or an addresser name of each mail to a display (6), said address by which the list display was carried out and a title, or an addresser name, A portable telephone which has an e-mail transmitting function provided with the 3rd control means that displays the contents of mail of a title or an addresser name on a display (6).

[Claim 2]The portable telephone according to claim 1 which a memory means distinguishes transmitted mail and received mail, and is stored.

[Claim 3]The portable telephone according to claim 2 which performs said search for either one of transmitting mail or reception mail according to selection operation of transmitting mail / reception mail according [ the 1st control means ] to a user.

[Claim 4]the 1st control means -- an operation key -- (-- the portable telephone according to any one of claims 1 to 3 which displays existence of mail searched from a memory means by displaying the number of e-mail on every 7).

[Claim 5]mail which received the 1st control means -- an operation key -- (-- the portable telephone according to claim 4 which displays a total of e-mail, and the number of unread mails on every 7).

[Claim 6]The portable telephone according to claim 4 or 5 which carries out the list display of an address, a title, or an addresser name of each mail with existing \*\* / unread distinction about mail which received the 2nd control means.

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## DETAILED DESCRIPTION

### [Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention is provided with a display and two or more operation keys, and a character input is possible for it, and it relates to the portable telephone which can transmit and receive e-mail.

[0002]

[Description of the Prior Art]In a portable telephone, as shown in drawing 2, the numbers 0-9 to each of ten operation keys (7) for inputting 1 or two or more hiraganas, Two or more Roman alphabets can be assigned, by operation of these operation keys (7), the input of a hiragana or a Roman alphabet is possible, and the mail created by this can be transmitted, or it can receive.

[0003]The transmitted mail and the received mail can be stored in an internal memory, and can check the contents of e-mail after transmission or reception. In this case, the user can display the contents of mail of that address by performing predetermined key operation by displaying the list of the addresses of transmitting mail or reception mail first, and choosing one address from that inside further.

[0004]

[Problem to be solved by the invention]However, in the conventional portable telephone, When using the contents of desired mail as a check plug out of the mail which was transmitted or was received, by repeating key operation, Since the operation on which the contents of each mail are displayed was required, moving cursor on the address of each mail in order, when there was many especially e-mail, operation was complicated and there was a problem which requires time.

[0005]Then, the purpose of this invention is to provide the portable telephone which can do easily and promptly the work which checks the contents of desired mail out of the mail which

was transmitted or was received.

[0006]

[Means for Solving the Problem]A portable telephone which has an e-mail transmitting function concerning this invention, A memory means which stores with an address mail transmitted and/or received, According to predetermined operation by a user, mail of an address which makes an initial character a character which each operation key (7) is assigned is searched from a memory means, an operation key -- (-- with the 1st control means that displays existence of e-mail on a display (6) at every 7). According to operation of one operation key (7) by a user, about mail of an address which makes an initial character a character which this operation key (7) is assigned. The 2nd control means that carries out the list display of the address (or a title or an addresser name) of each mail to a display (6), According to user's operation which chooses one address (or a title or an addresser name) from said addresses (or a title or an addresser name) by which the list display was carried out, It has the 3rd control means that displays the contents of mail of a selected address (or a title or an addresser name) on a display (6).

[0007]In a portable telephone of above-mentioned this invention, whenever it transmits e-mail or receives, an address and the contents of the mail are stored in a memory means. Then, when checking the contents of e-mail, a user performs predetermined operation of operating a mail key. according to this operation, mail of an address which makes an initial character a character which each operation key (7) is assigned is searched -- an operation key -- (-- existence of e-mail is displayed by display (6) on every 7). then, a user -- the contents of e-mail -- it is going to check -- from memory about a partner's address, a memo, etc., an initial character of the address is grasped and one operation key (7) to which the character is assigned is operated. According to this operation, the list display of the address of each mail is carried out to a display (6) about mail of an address which makes an initial character a character which this operation key (7) is assigned. Then, a user chooses an address of mail which uses the contents as a check plug from addresses by which the list display is carried out. As a result, the contents of mail of a selected address are displayed on a display (6).

[0008]In specific constitution, a memory means distinguishes and stores transmitted mail and received mail, and the 1st control means performs said search for either transmitting mail or reception mail according to selection operation of the transmitting mail / reception mail by a user. A retrieval object is narrowed down by this and search time is shortened.

[0009]moreover -- in specific constitution -- the 1st control means -- an operation key -- (-- mail which displayed existence of mail searched from a memory means by displaying the number of e-mail on every 7), and was received especially -- an operation key -- (-- a total of e-mail and the number of unread mails are displayed on every 7). this -- an operation key -- (-- the number of unread mails can be known to every 7), and it can be considered as a standard at the time

of choosing one operation key (7) which should be operated.

[0010]In other specific constitution, the 2nd control means carries out the list display of the address of each mail with existing \*\* / unread distinction about received mail. By this, selection of mail which uses the contents as a check plug becomes easy.

[0011]

[Effect of the Invention]Since according to the portable telephone which has an e-mail transmitting function concerning this invention two or more mails which were transmitted or were received are classified according to the initial character of each address for every operation key and a list display is carried out to a display, By operating the operation key according to which mail of the request which uses the contents as a check plug is classified, the mail can be selected easily and promptly and the contents can be checked.

[0012]

[Mode for carrying out the invention]Hereafter, it explains concretely over Drawings about an embodiment of the invention. As shown in drawing 2, have the casing (11) on which the antenna (1) protruded, and a display (6) and two or more operation keys (7) are arranged on the surface of this casing (11), and the portable telephone concerning this invention. A microphone (10) is arranged by a loudspeaker (9) and the lower end part at the upper bed part of this casing (11). 1 or two or more hiraganas, and two or more Roman alphabets are assigned to ten operation keys (7) for inputting the numbers 0-9, respectively, and the input of a hiragana or a Roman alphabet is possible by operation of these operation keys (7).

[0013]Drawing 1 expresses the configuration of the portable telephone of above-mentioned this invention. Like a graphic display, the signal which the receiving circuit (3) and the sending circuit (4) are connected in parallel to the duplexer (2), and was received by the antenna (1) is supplied to a receiving circuit (3) through a duplexer (2), and a receiver voice signal restores to it. Through a control circuit (5), this receiver voice signal is supplied to a loudspeaker (9), and sound emission is carried out. The transmission voice signal inputted into the microphone (10) is supplied to a sending circuit (4) through a control circuit (5), and receives abnormal conditions. The transmission voice signal which received abnormal conditions is transmitted from an antenna (1) through a duplexer (2).

[0014]It is also possible to receive the E-mail which a display (6) and two or more operation keys (7) are connected, transmits to the other party by making into an E-mail the text created by operation of the operation key (7), and is transmitted to a control circuit (5) from the other party. The memory (8) is connected to the control circuit (5), and a telephone number, a mail text, etc. are stored in this memory (8). Reception mail, transmitting mail, and deleted mail are distinguished mutually, and are stored in a memory (8).

[0015]Drawing 3 expresses the mail administration table established in the inside of a memory (8), and an address, distinction has been deleted [ reception (unread or existing \*\*) /

transmission / ], and the number (key number) which can be inputted by the operation key to which the initial character of the address is assigned are stored about each mail.

[0016]Drawing 4 searches one desired mail from two or more mails stored in the memory (8), and expresses the procedure which a control circuit (5) performs in the e-mail check mode for checking the contents. E-mail check mode is started by operating a mail key. First, when it judges whether the mail key was pressed and is judged as yes, it shifts to Step S2 and the \*\*\*\* box selection picture shown in drawing 5 (a) is expressed on a display (6) as Step S1. The receiving box where reception mail was stored, the transmission box where transmitting mail was stored, and the deleted box where deleted mail was stored are displayed on a box selection picture. According to this, a user performs operation which chooses one box.

[0017]Next, when it judges whether one box was chosen in Step S3 and judged as yes, The number of the mails stored in the box selected in step S4 is counted to every key number (0-9), for example, in the case of a receiving box, the \*\*\*\* mail numeral screen shown in drawing 5 (b) is displayed. In this e-mail numeral screen, "the number of arrived mails / the number of preservation mails" is displayed on every key number (0-9). In this screen, a user performs operation which chooses one key number based on the memory and the memo of a partner's mail address which use the contents of e-mail as a check plug.

[0018]Then, when it judges whether one key number was chosen in Step S5 of drawing 4 and judged as yes, The mail currently assigned to the selected key number is searched with Step S6, and the list display of the address of the searched mail is carried out to a display (6) with existing \*\* / unread distinction. For example, "5" currently assigned to the operation key of this key number when a key number "5" is chosen, Mail of the address which starts in "j", "k", "l", "J", "K", or "L" is searched, and the list display of the address of the searched mail is carried out to a display (6) with existing \*\* / unread mark like drawing 5 (c). According to this, a user performs operation which chooses mail (address) of the partner who uses the contents as a check plug.

[0019]Then, when it is judged whether one mail was chosen and it is judged as yes, it shifts to Step S8, the contents of the selected mail are read from a memory (8), and it expresses on a display (6) as Step S7 of drawing 4. When it judges whether operation of e-mail check continuation was performed and is finally judged as yes by the user in step S9, it returns to Step S1, search of e-mail and check procedure are repeated, and procedure is ended when judged as no.

[0020]Since according to the portable telephone of above-mentioned this invention two or more mails which were transmitted, and were received or were deleted are classified according to the initial character of each address for every operation key and a list display is carried out to a display, By operating the operation key according to which the mail which uses the contents as a check plug is classified, the mail can be selected easily and promptly and the

contents can be checked.

[0021] Various modification is possible for each part composition of this invention in technical scope given not only in the above-mentioned embodiment but Claims. For example, although the address of the searched mail is expressed as the list display screen shown in drawing 5 (c), it is possible not only this but to carry out the list display of the title of the mail or the addresser name.

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[Translation done.]



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**TECHNICAL FIELD**

[Field of the Invention]This invention is provided with a display and two or more operation keys, and a character input is possible for it, and it relates to the portable telephone which can transmit and receive e-mail.

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**PRIOR ART**

[Description of the Prior Art]In a portable telephone, as shown in drawing 2, the numbers 0-9 to each of ten operation keys (7) for inputting 1 or two or more hiraganas, Two or more Roman alphabets can be assigned, by operation of these operation keys (7), the input of a hiragana or a Roman alphabet is possible, and the mail created by this can be transmitted, or it can receive.

[0003]The transmitted mail and the received mail can be stored in an internal memory, and can check the contents of e-mail after transmission or reception. In this case, the user can display the contents of mail of that address by performing predetermined key operation by displaying the list of the addresses of transmitting mail or reception mail first, and choosing one address from that inside further.

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## EFFECT OF THE INVENTION

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[Effect of the Invention]Since according to the portable telephone which has an e-mail transmitting function concerning this invention two or more mails which were transmitted or were received are classified according to the initial character of each address for every operation key and a list display is carried out to a display, By operating the operation key according to which mail of the request which uses the contents as a check plug is classified, the mail can be selected easily and promptly and the contents can be checked.

[0012]

[Mode for carrying out the invention]Hereafter, it explains concretely over Drawings about an embodiment of the invention. As shown in drawing 2, have the casing (11) on which the antenna (1) protruded, and a display (6) and two or more operation keys (7) are arranged on the surface of this casing (11), and the portable telephone concerning this invention. A microphone (10) is arranged by a loudspeaker (9) and the lower end part at the upper bed part of this casing (11). 1 or two or more hiraganas, and two or more Roman alphabets are assigned to ten operation keys (7) for inputting the numbers 0-9, respectively, and the input of a hiragana or a Roman alphabet is possible by operation of these operation keys (7).

[0013]Drawing 1 expresses a configuration of a portable telephone of above-mentioned this invention. Like a graphic display, a signal which a receiving circuit (3) and a sending circuit (4) are connected in parallel to a duplexer (2), and was received by an antenna (1) is supplied to a receiving circuit (3) through a duplexer (2), and a receiver voice signal restores to it. Through a control circuit (5), this receiver voice signal is supplied to a loudspeaker (9), and sound emission is carried out. A transmission voice signal inputted into a microphone (10) is supplied to a sending circuit (4) through a control circuit (5), and receives abnormal conditions. A transmission voice signal which received abnormal conditions is transmitted from an antenna (1) through a duplexer (2).

[0014]A display (6) and two or more operation keys (7) are connected to a control circuit (5).

It is also possible to receive an E-mail which transmits to the other party by making into an E-mail a text created by operation of an operation key (7), and is transmitted from the other party. A memory (8) is connected to a control circuit (5), and a telephone number, a mail text, etc. are stored in this memory (8). Reception mail, transmitting mail, and deleted mail are distinguished mutually, and are stored in a memory (8).

[0015]Drawing 3 expresses a mail administration table established in an inside of a memory (8).

About each mail, an address, distinction has been deleted [ reception (unread or existing \*\*) / transmission / ], and a number (key number) which can be inputted by an operation key to which an initial character of an address is assigned are stored.

[0016]Drawing 4 searches one desired mail from two or more mails stored in a memory (8), and expresses procedure which a control circuit (5) performs in e-mail check mode for checking the contents. E-mail check mode is started by operating a mail key. First, when it judges whether the mail key was pressed and is judged as yes, it shifts to Step S2 and a \*\*\*\* box selection picture shown in drawing 5 (a) is expressed on a display (6) as Step S1. A receiving box where reception mail was stored, a transmission box where transmitting mail was stored, and a deleted box where deleted mail was stored are displayed on a box selection picture. According to this, a user performs operation which chooses one box.

[0017]Next, when it judges whether one box was chosen in Step S3 and judged as yes, The number of the mails stored in the box selected in step S4 is counted to every key number (0-9), for example, in the case of a receiving box, the \*\*\*\* mail numeral screen shown in drawing 5 (b) is displayed. In this e-mail numeral screen, "the number of arrived mails / the number of preservation mails" is displayed on every key number (0-9). In this screen, a user performs operation which chooses one key number based on the memory and the memo of a partner's mail address which use the contents of e-mail as a check plug.

[0018]Then, when it judges whether one key number was chosen in Step S5 of drawing 4 and judged as yes, The mail currently assigned to the selected key number is searched with Step S6, and the list display of the address of the searched mail is carried out to a display (6) with existing \*\* / unread distinction. For example, "5" currently assigned to the operation key of this key number when a key number "5" is chosen, Mail of the address which starts in "j", "k", "l", "J", "K", or "L" is searched, and the list display of the address of the searched mail is carried out to a display (6) with existing \*\* / unread mark like drawing 5 (c). According to this, a user performs operation which chooses mail (address) of the partner who uses the contents as a check plug.

[0019]Then, when it is judged whether one mail was chosen and it is judged as yes, it shifts to Step S8, the contents of the selected mail are read from a memory (8), and it expresses on a

display (6) as Step S7 of drawing 4. When it judges whether operation of e-mail check continuation was performed and is finally judged as yes by the user in step S9, it returns to Step S1, search of e-mail and check procedure are repeated, and procedure is ended when judged as no.

[0020]Since according to the portable telephone of above-mentioned this invention two or more mails which were transmitted, and were received or were deleted are classified according to the initial character of each address for every operation key and a list display is carried out to a display, By operating the operation key according to which the mail which uses the contents as a check plug is classified, the mail can be selected easily and promptly and the contents can be checked.

[0021]Various modification is possible for each part composition of this invention in technical scope given not only in the above-mentioned embodiment but Claims. For example, although the address of the searched mail is expressed as the list display screen shown in drawing 5 (c), it is possible not only this but to carry out the list display of the title of the mail or the addresser name.

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**TECHNICAL PROBLEM**

[Problem to be solved by the invention]However, in the conventional portable telephone, When using the contents of desired mail as a check plug out of mail which was transmitted or was received, by repeating key operation, Since operation on which the contents of each mail are displayed was required, moving cursor on an address of each mail in order, when there was many especially e-mail, operation was complicated and there was a problem which requires time.

[0005]Then, the purpose of this invention is to provide a portable telephone which can do easily and promptly work which checks the contents of desired mail out of mail which was transmitted or was received.

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MEANS

[Means for Solving the Problem]A portable telephone which has an e-mail transmitting function concerning this invention, A memory means which stores with an address mail transmitted and/or received, According to predetermined operation by a user, mail of an address which makes an initial character a character which each operation key (7) is assigned is searched from a memory means, an operation key -- (-- with the 1st control means that displays existence of e-mail on a display (6) at every 7). According to operation of one operation key (7) by a user, about mail of an address which makes an initial character a character which this operation key (7) is assigned. The 2nd control means that carries out the list display of the address (or a title or an addresser name) of each mail to a display (6), According to user's operation which chooses one address (or a title or an addresser name) from said addresses (or a title or an addresser name) by which the list display was carried out, It has the 3rd control means that displays the contents of mail of a selected address (or a title or an addresser name) on a display (6).

[0007]In a portable telephone of above-mentioned this invention, whenever it transmits e-mail or receives, an address and the contents of the mail are stored in a memory means. Then, when checking the contents of e-mail, a user performs predetermined operation of operating a mail key. according to this operation, mail of an address which makes an initial character a character which each operation key (7) is assigned is searched -- an operation key -- (-- existence of e-mail is displayed by display (6) on every 7). then, a user -- the contents of e-mail -- it is going to check -- from memory about a partner's address, a memo, etc., an initial character of the address is grasped and one operation key (7) to which the character is assigned is operated. According to this operation, the list display of the address of each mail is carried out to a display (6) about mail of an address which makes an initial character a character which this operation key (7) is assigned. Then, a user chooses an address of mail which uses the contents as a check plug from addresses by which the list display is carried

out. As a result, the contents of mail of a selected address are displayed on a display (6).

[0008]In specific constitution, a memory means distinguishes and stores transmitted mail and received mail, and the 1st control means performs said search for either transmitting mail or reception mail according to selection operation of the transmitting mail / reception mail by a user. A retrieval object is narrowed down by this and search time is shortened.

[0009]moreover -- in specific constitution -- the 1st control means -- an operation key -- (-- mail which displayed existence of mail searched from a memory means by displaying the number of e-mail on every 7), and was received especially -- an operation key -- (-- a total of e-mail and the number of unread mails are displayed on every 7). this -- an operation key -- (-- the number of unread mails can be known to every 7), and it can be considered as a standard at the time of choosing one operation key (7) which should be operated.

[0010]In other specific constitution, the 2nd control means carries out the list display of the address of each mail with existing \*\* / unread distinction about received mail. By this, selection of mail which uses the contents as a check plug becomes easy.

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## DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is a block diagram showing the composition of the portable telephone concerning this invention.

[Drawing 2] It is a front view of this portable telephone.

[Drawing 3] It is a chart showing the mail administration table established in a memory.

[Drawing 4] It is a flow chart showing e-mail search / check procedure which a control circuit performs.

[Drawing 5] It is a figure showing the example of a screen display in e-mail check mode.

[Explanations of letters or numerals]

(11) Casing

(5) Control circuit

(6) Display

(7) Operation key

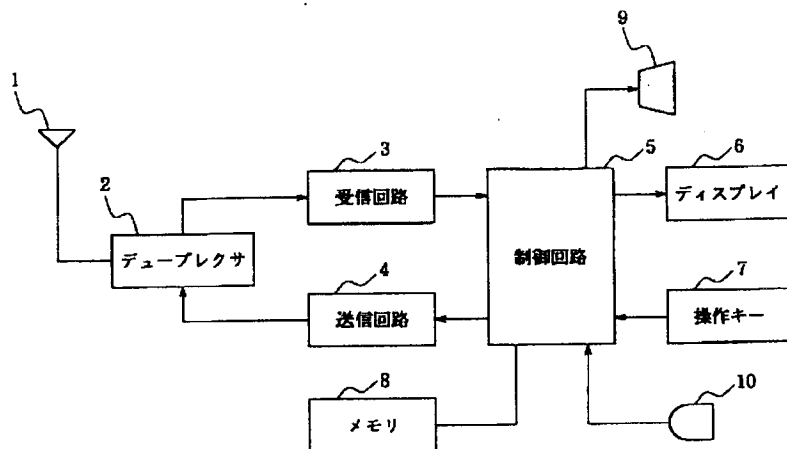
(8) Memory

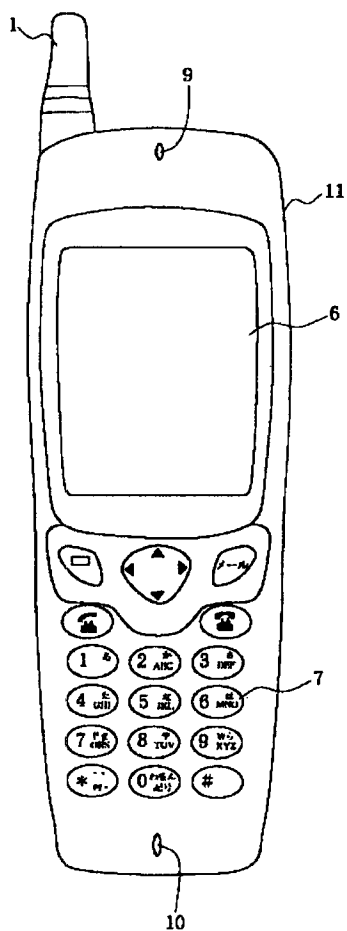
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**DRAWINGS**[Drawing 1][Drawing 2]

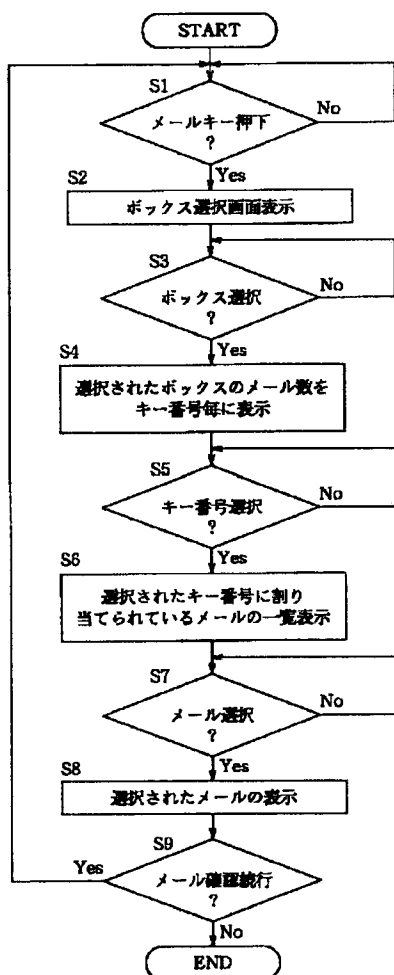


[Drawing 3]

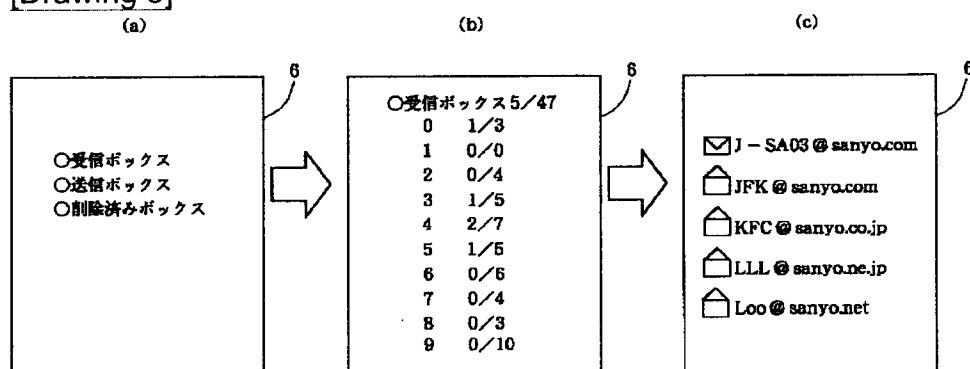
8

番号	アドレス	区別	キー番号
1	J-SA03@sanyo.com	受信(未読)	5
2	JFK@sanyo.com	受信(既読)	5
3	ABC@defg.com	送信	2
4	HUJ@klmn.com	送信	4
5	OPQ@rstu.com	削除済み	6
.	.	.	.
.	.	.	.
.	.	.	.

[Drawing 4]



[Drawing 5]



[Translation done.]

(19)日本国特許庁 (JP)

(12) 公開特許公報 (A)

(11)特許出願公開番号

特開2002-359667

(P2002-359667A)

(43)公開日 平成14年12月13日(2002.12.13)

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G 0 6 F 13/00	6 2 0	C 0 6 F 13/00	6 2 0 5 K 0 6 7
H 0 4 Q 7/38		H 0 4 B 7/26	1 0 9 T

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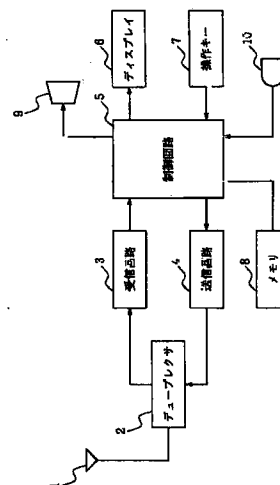
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(54)【発明の名称】 メール送受信機能を有する携帯電話機

(57)【要約】

【課題】 メールの送受信が可能な携帯電話機において、送信し若しくは受信したメールの中から所望のメールの内容を確認する作業を迅速化する。

【解決手段】 本発明に係る携帯電話機は、送信し若しくは受信したメールを格納するメモリ8と、メール管理手続きを実行する制御回路5とを具えている。制御回路5は、ユーザによる所定の操作に応じて、各操作キー7に割り当てられている文字を先頭文字とするアドレスのメールをメモリ8から検索する手続きと、操作キー7毎にメールの存在をディスプレイ6に表示する手続きと、ユーザによる1つの操作キー7の操作に応じて、該操作キー7に割り当てられている文字を先頭文字とするアドレスのメールについて、各メールのアドレスを一覧表示する手続きと、一覧表示されたアドレスの中から1つのアドレスを選択するユーザ操作に応じて、選択されたアドレスのメールの内容を表示する手続きとを実行する。



【特許請求の範囲】

【請求項1】 ディスプレイ(6)と複数の操作キー(7)を具え、各操作キー(7)には、1つの数字と、少なくとも1つの平仮名及び／又はローマ字が割り当てられ、これらの操作キー(7)の操作によって文字入力が可能であると共に、メールの送受信が可能な携帯電話機において、送信及び／又は受信したメールをアドレスと共に格納するメモリ手段と、ユーザによる所定の操作に応じて、各操作キー(7)に割り当てられている文字を先頭文字とするアドレスのメールをメモリ手段から検索し、操作キー(7)毎にメールの存在をディスプレイ(6)に表示する第1制御手段と、ユーザによる1つの操作キー(7)の操作に応じて、該操作キー(7)に割り当てられている文字を先頭文字とするアドレスのメールについて、各メールのアドレス、タイトル又は発信者名をディスプレイ(6)に一覧表示する第2制御手段と、前記一覧表示されたアドレス、タイトル又は発信者名の中から、1つのアドレス、タイトル又は発信者名を選択するユーザ操作に応じて、選択されたアドレス、タイトル又は発信者名のメールの内容をディスプレイ(6)に表示する第3制御手段とを具えていることを特徴とするメール送受信機能を有する携帯電話機。

【請求項2】 メモリ手段は、送信したメールと受信したメールを区別して格納する請求項1に記載の携帯電話機。

【請求項3】 第1制御手段は、ユーザによる送信メール／受信メールの選択操作に応じ、送信メール又は受信メールの何れか一方を対象として、前記検索を実行する請求項2に記載の携帯電話機。

【請求項4】 第1制御手段は、操作キー(7)毎にメールの数を表示することによって、メモリ手段から検索したメールの存在を表示する請求項1乃至請求項3の何れかに記載の携帯電話機。

【請求項5】 第1制御手段は、受信したメールについて、操作キー(7)毎に、メールの総数と未読メールの数を表示する請求項4に記載の携帯電話機。

【請求項6】 第2制御手段は、受信したメールについて、各メールのアドレス、タイトル又は発信者名を既読／未読の区別と共に一覧表示する請求項4又は請求項5に記載の携帯電話機。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】 本発明は、ディスプレイと複数の操作キーを具えて文字入力が可能であると共に、メールの送受信が可能な携帯電話機に関するものである。

【0002】

【従来の技術】 携帯電話機においては、図2に示す如く、0～9の数字を入力するための10個の操作キー

(7)のそれぞれに、1或いは複数の平仮名と、複数のローマ字とが割り当てられ、これらの操作キー(7)の操作によって平仮名若しくはローマ字の入力が可能であり、これによって作成したメールを送信し、或いは受信することが出来る。

【0003】 又、送信したメールや受信したメールは、内部のメモリに格納しておくことが可能であり、送信又は受信の後で、メールの内容を確認することが可能である。この場合、ユーザは、所定のキー操作を行なうことによって、先ず送信メール又は受信メールのアドレスの一覧を表示させ、更にその中から1つのアドレスを選択することによって、そのアドレスのメールの内容を表示させることが出来る。

【0004】

【発明が解決しようとする課題】 しかしながら、従来の携帯電話機においては、送信し若しくは受信したメールの中から所望のメールの内容を確認せんとする場合、キー操作を繰り返すことによって、カーソルを順番に各メールのアドレス上に移動させながら、各メールの内容を表示させる操作が必要であるので、特にメール数が多い場合、操作が煩雑で時間がかかる問題があった。

【0005】 そこで本発明の目的は、送信し若しくは受信したメールの中から所望のメールの内容を確認する作業を容易且つ迅速に行なうことが出来る携帯電話機を提供することである。

【0006】

【課題を解決する為の手段】 本発明に係るメール送受信機能を有する携帯電話機は、送信及び／又は受信したメールをアドレスと共に格納するメモリ手段と、ユーザによる所定の操作に応じて、各操作キー(7)に割り当てられている文字を先頭文字とするアドレスのメールをメモリ手段から検索し、操作キー(7)毎にメールの存在をディスプレイ(6)に表示する第1制御手段と、ユーザによる1つの操作キー(7)の操作に応じて、該操作キー(7)に割り当てられている文字を先頭文字とするアドレスのメールについて、各メールのアドレス(又はタイトル若しくは発信者名)をディスプレイ(6)に一覧表示する第2制御手段と、前記一覧表示されたアドレス(又はタイトル若しくは発信者名)の中から1つのアドレス(又はタイトル若しくは発信者名)を選択するユーザ操作に応じて、選択されたアドレス(又はタイトル若しくは発信者名)のメールの内容をディスプレイ(6)に表示する第3制御手段とを具えている。

【0007】 上記本発明の携帯電話機においては、メールを送信し若しくは受信する度に、そのメールのアドレスと内容がメモリ手段に格納される。その後、メールの内容を確認する際、ユーザは、メールキーを操作する等の所定の操作を行なう。この操作に応じて、各操作キー(7)に割り当てられている文字を先頭文字とするアドレスのメールが検索され、操作キー(7)毎にメールの存在

がディスプレイ(6)に表示される。そこでユーザは、メールの内容を確認せんとする相手のアドレスについての記憶やメモなどから、そのアドレスの先頭文字を把握し、その文字が割り当てられている1つの操作キー(7)を操作する。この操作に応じて、該操作キー(7)に割り当てられている文字を先頭文字とするアドレスのメールについて、各メールのアドレスがディスプレイ(6)に一覧表示される。そこでユーザは、一覧表示されているアドレスの中から、内容を確認せんとするメールのアドレスを選択する。この結果、選択されたアドレスのメールの内容がディスプレイ(6)に表示される。

【0008】具体的構成において、メモリ手段は、送信したメールと受信したメールを区別して格納し、第1制御手段は、ユーザによる送信メール/受信メールの選択操作に応じ、送信メール又は受信メールの一方を対象として、前記検索を実行する。これによって検索対象が絞り込まれて、検索時間が短縮される。

【0009】又、具体的構成において、第1制御手段は、操作キー(7)毎にメールの数を表示することによって、メモリ手段から検索したメールの存在を表示し、特に受信したメールについては、操作キー(7)毎に、メールの総数と未読メールの数を表示する。これによって、操作キー(7)毎に未読メールの数を知らることが出来、操作すべき1つの操作キー(7)を選択する際の基準とすることが出来る。

【0010】他の具体的構成において、第2制御手段は、受信したメールについて、各メールのアドレスを既読/未読の区別と共に一覧表示する。これによって、内容を確認せんとするメールの選択が容易となる。

【0011】

【発明の効果】本発明に係るメール送受信機能を有する携帯電話機によれば、送信し若しくは受信した複数のメールが、それぞれのアドレスの先頭文字により操作キー毎に分類されて、ディスプレイに一覧表示されるので、内容を確認せんとする所望のメールが分類されている操作キーを操作することにより、そのメールを容易且つ迅速に選び出して、内容の確認を行なうことが出来る。

【0012】

【発明の実施の形態】以下、本発明の実施の形態につき、図面に沿って具体的に説明する。本発明に係る携帯電話機は、図2に示す如く、アンテナ(1)が突設されたケーシング(11)を具え、該ケーシング(11)の表面に、ディスプレイ(6)と複数の操作キー(7)が配備されると共に、該ケーシング(11)の上端部にはスピーカ(9)、下端部にはマイクロホン(10)が配備される。尚、0～9の数字を入力するための10個の操作キー(7)にはそれぞれ、1或いは複数の平仮名と、複数のローマ字とが割り当てられており、これらの操作キー(7)の操作によって平仮名若しくはローマ字の入力が可能である。

【0013】図1は、上記本発明の携帯電話機の機器構

成を表わしている。図示の如く、デュープレクサ(2)に対して並列に受信回路(3)及び送信回路(4)が接続されており、アンテナ(1)によって受信された信号は、デュープレクサ(2)を経て受信回路(3)に供給され、受話音声信号が復調される。該受話音声信号は、制御回路(5)を経てスピーカ(9)へ供給され、放音される。又、マイクロホン(10)に入力された送話音声信号は、制御回路(5)を経て送信回路(4)へ供給され、変調を受ける。変調を受けた送話音声信号は、デュープレクサ(2)を経てアンテナ(1)から送信される。

【0014】制御回路(5)には、ディスプレイ(6)及び複数の操作キー(7)が接続されており、操作キー(7)の操作によって作成した文章を電子メールとして相手側に送信し、相手側から送信されてくる電子メールを受信することも可能である。更に制御回路(5)にはメモリ(8)が接続されており、該メモリ(8)には、電話番号やメール文章等が格納される。尚、受信メールと送信メールと削除済みメールは、互いに区別してメモリ(8)に格納される。

【0015】図3は、メモリ(8)の内部に設けられるメール管理テーブルを表わしており、各メールについて、アドレスと、受信(未読又は既読)/送信/削除済みの区別と、アドレスの先頭文字が割り当てられている操作キーによって入力可能な数字(キー番号)とが格納される。

【0016】図4は、メモリ(8)に格納されている複数のメールから所望の1つのメールを検索して、その内容を確認するためのメール確認モードにおいて、制御回路(5)が実行する手続を表わしている。尚、メール確認モードは、メールキーを操作することによって開始する。先ずステップS1では、メールキーが押下されたかどうかを判断し、イエスと判断されたとき、ステップS2に移行して、図5(a)に示す如きボックス選択画面をディスプレイ(6)に表示する。ボックス選択画面には、受信メールが格納された受信ボックスと、送信メールが格納された送信ボックスと、削除済みメールが格納された削除済みボックスとが表示される。これに応じて、ユーザは、1つのボックスを選択する操作を行なう。

【0017】次にステップS3では、1つのボックスが選択されたかどうかを判断し、イエスと判断されたとき、ステップS4にて、選択されたボックスに格納されているメールの数をキー番号(0～9)毎にカウントし、例えば受信ボックスの場合は図5(b)に示す如きメール数表示画面を表示する。該メール数表示画面においては、キー番号(0～9)毎に、“新着メール数/保存メール数”が表示される。この画面において、ユーザは、メールの内容を確認せんとする相手のメールアドレスの記憶やメモに基づいて、1つのキー番号を選択する操作を行なう。

【0018】続いて、図4のステップS5では、1つのキー番号が選択されたかどうかを判断し、イエスと判断

されたとき、ステップS6にて、選択されたキー番号に割り当てられているメールを検索し、検索されたメールのアドレスを既読／未読の区別と共にディスプレイ(6)に一覧表示する。例えばキー番号“5”を選択した場合、該キー番号の操作キーに割り当てられている

“5”、“j”、“k”、“l”、“J”、“K”、又は“L”で始まるアドレスのメールを検索し、検索されたメールのアドレスを、図5(c)の如く既読／未読のマークと共にディスプレイ(6)に一覧表示する。これに応じて、ユーザは、内容を確認せんとする相手のメール(アドレス)を選択する操作を行なう。

【0019】その後、図4のステップS7では、1つのメールが選択されたかどうか判断され、イエスと判断されたとき、ステップS8に移行して、選択されたメールの内容をメモリ(8)から読み出して、ディスプレイ(6)に表示する。最後に、ステップS9にて、ユーザによってメール確認続行の操作が行なわれたかどうか判断し、イエスと判断されたときステップS1に戻って、メールの検索、確認手続きを繰り返し、ノーと判断されたときは手続きを終了する。

【0020】上記本発明の携帯電話機によれば、送信し、受信し、若しくは削除した複数のメールが、それぞれのアドレスの先頭文字により操作キー毎に分類されて、ディスプレイに一覧表示されるので、内容を確認せんとするメールが分類されている操作キーを操作するこ

とにより、そのメールを容易且つ迅速に選出して、内容の確認を行なうことが出来る。

【0021】尚、本発明の各部構成は上記実施の形態に限らず、特許請求の範囲に記載の技術的範囲内で種々の変形が可能である。例えば、図5(c)に示す一覧表示画面では、検索されたメールのアドレスを表示しているが、これに限らず、そのメールのタイトル、或いは発信者名を一覧表示することも可能である。

【図面の簡単な説明】

【図1】本発明に係る携帯電話機の構成を表わすブロック図である。

【図2】該携帯電話機の正面図である。

【図3】メモリに設けられるメール管理テーブルを表わす図表である。

【図4】制御回路が実行するメール検索／確認手続きを表わすフローチャートである。

【図5】メール確認モードにおける画面表示例を表わす図である。

【符号の説明】

(1) ケーシング

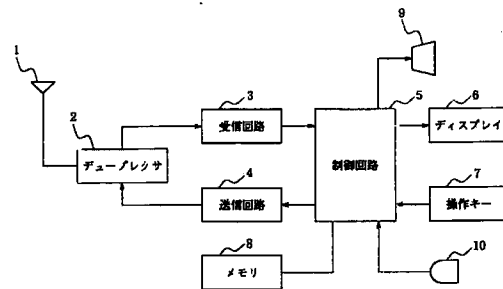
(5) 制御回路

(6) ディスプレイ

(7) 操作キー

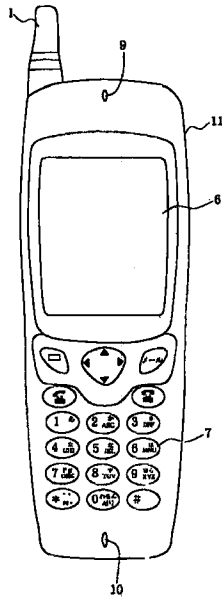
(8) メモリ

【図1】





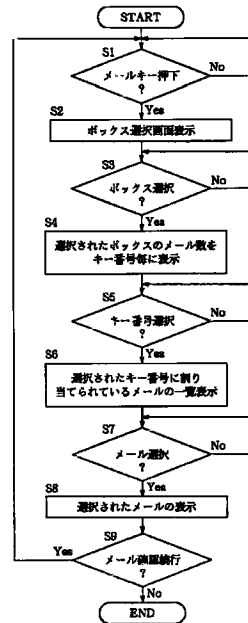
【図2】



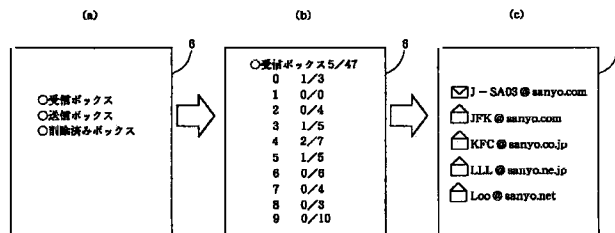
【図3】

番号	アドレス	区別	キー番号
1	J-SA03@sanyo.com	受信(未読)	5
2	JFK@sanyo.com	受信(既読)	5
3	ABC@defg.com	送信	2
4	HU@klmn.com	送信	4
5	OK@rstu.com	削除済み	8
・	・	・	・
・	・	・	・
・	・	・	・

【図4】



【図5】



フロントページの続き

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5K067 AA34 BB04 DD53 FF23 FF31  
GG11 HH23